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PATENT APPLICATION

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IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s):	Alan R. Arthur et al.	Confirmation No.:	9379
Application No.:	10/677,024	Examiner:	CHOU, Tony Sheng Hsiang
Filing Date:	September 30, 2003	Group Art Unit:	1795

Title: Method of Forming an Interface Between Components Having Different Rates of Expansion

Mail Stop Appeal Brief - Patents
Commissioner For Patents
PO Box 1450
Alexandria, VA 22313-1450

TRANSMITTAL OF REPLY BRIEF

Transmitted herewith is the Reply Brief with respect to the Examiner's Answer mailed on September 26, 2008 .

This Reply Brief is being filed pursuant to 37 CFR 1.193(b) within two months of the date of the Examiner's Answer.

(Note: Extensions of time are not allowed under 37 CFR 1.136(a))

(Note: Failure to file a Reply Brief will result in dismissal of the Appeal as to the claims made subject to an expressly stated new ground rejection.)

No fee is required for filing of this Reply Brief.

If any fees are required please charge Deposit Account 08-2025.

Respectfully submitted,
Alan R. Arthur et al.

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REPLY BRIEF

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Sir:

This is a Reply Brief under Rule 41.41 (37 C.F.R) in response to the Examiner's Answer of March 9, 2007 (the "Examiner's Answer" or the "Answer"). In Section 10, the Answer contains a response to some of the arguments made in Appellant's brief. Appellant now responds to the Examiner's Answer as follows.

(1) Claim 1 is patentable over Ito:

For reference, claim 1 recites: "A method of forming an interface between components having different rates of volumetric expansion, said method comprising forming an interface surface of said interface with respect to a center of growth such that slippage occurs at said interface between said components during volumetric expansion." As Appellant has noted, the concept of "center of growth," as defined in Appellant's specification, appears to be the exclusive invention of the Appellant. There is no other reference of record that teaches or suggests what a "center of growth" is as defined and claimed by the Appellant. Consequently, none of the prior art of record can teach or suggest how to determine a center of growth. This subject matter is found only in Appellant's specification.

In response, the Answer reminds Appellant "that claims are given the broadest reasonable interpretation and that limitations appearing in the specification should not be read into the claim. The term 'center of growth' is not defined in the claims." (Answer, p. 5). Appellant needs no such reminder.

However, Appellant refers to the Manual of Patent Examining Procedure, which states that "USPTO personnel are to give claims their broadest reasonable interpretation ***in light of the supporting disclosure***. *In re Morris*, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027-28 (Fed. Cir. 1997)." (MPEP § 2106) (emphasis added). MPEP §1 222.01 also states that "the words of the claim must be given their plain meaning *unless the plain meaning is inconsistent with the specification*. *In re Zletz*, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989)." (Emphasis added).

Thus, the Examiner may not ignore the definition of "center of growth" given in Appellant's specification. The Examiner may not select a new definition simply because doing so makes claim 1 rejectable. To the contrary,

> An applicant is entitled to be his or her own lexicographer .... Where an explicit definition is provided by the applicant for a term, that definition will control interpretation of the term as it is used in the claim. Toro Co. v. White Consolidated Industries Inc., 199 F.3d 1295, 1301, 53 USPQ2d 1065, 1069 (Fed. Cir. 1999) (MPEP § 2111.01).

Consequently, if Appellant is given the right to define the term "center of growth" as required by applicable law and the MPEP, it becomes inescapable that the subject matter disclosed and claimed in Appellant's application is entirely outside the scope and content of the cited prior art.

Next, the Answer takes issue with Appellant's definition of "center of growth." According to the Answer, "the appellant defines 'center of growth' as a point at which two or more planes containing a portion of an interface or interfaces between two components intersect. ... Since it is unclear where the two or more planes are located, a "center of growth" can be chosen as being any arbitrary point along an interface between two components." (Answer, p. 5). This is incorrect.

In taking this position, the Answer is focusing on only one aspect of the definition provided by Appellant of the term "center of growth." According to Appellant's specification, "the center of growth (130) is the intersection of the lines drawn along interfaces between the components." (Appellant's specification, paragraph 0026). "The center of growth is a point at which two or more planes containing a portion of an interface or interfaces between two components intersect." (Appellant's specification, paragraph 0015). "The center of growth (120) is also a point that will be at the intersection of two or more

planes which each include a portion of one or more interface surfaces between components." (Appellant's specification, paragraph 0020). Taken together as a whole, Appellant respectfully submits that this definition clearly and unambiguously defines the term "center of growth" for one of skill in the art, the fact that the Answer does not understand the definition notwithstanding.

Appellant wishes to point out most forcefully that the concept of "center of growth" has not been found in any prior art reference cited throughout the prosecution of this application.

Appellant has also noted that the primary prior art reference, Ito, does not teaching anything about the act of forming an interface as recited in claim 1. Rather, Ito merely describes an interface that has already been formed. In at least this respect, Ito is entirely irrelevant to claim 1.

"In response, [the Answer argues that] although Ito does describe an interface that has been formed, it also describes the concept of forming an interface between components having different rates of thermal expansion (volumetric expansion) such that slippage occurs at the interface between the components during thermal expansion." (Answer, p. 6). However, the Answer cites no portion of Ito or any other evidence in support of this conclusory statement. Appellant finds nothing in Ito that teaches a method of forming an interface other than what one might infer from the already-formed interface Ito describes. In any event, Ito clearly does not teach or suggest anything about the method of claim 1 in which a "center of growth" is first determined for a proposed interface between components so that the subsequent method step of "forming an interface surface of said interface" can then be

performed "with respect to [the] center of growth." (Claim 1). Consequently, Ito is utterly irrelevant to, and fails to anticipate any of the subject matter of, claim 1.

"A claim is anticipated [under 35 U.S.C. § 102] only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). See M.P.E.P. § 2131. Therefore, for at least the reasons explained here, Ito does not and cannot anticipated claim 1. Therefore, the rejection based on Ito of claim 1 and its dependent claims should not be sustained.

(2) Claims 1 and 9 are patentable over Bennett:

The Bennett reference is as inapplicable to claim 1 as is Ito and for largely the same reasons. Like Ito, Bennett does not teach or suggest anything regarding a center of growth.

According to the Answer,

> As disclosed in Bennett, "When the assembly of FIG 4 is exposed to a temperature change the difference in the expansion coefficients of steel and carbide results in a differential expansion of the two components of the assembly" (See column 4, lines 12-15). Bennett further discloses that" ... points 62, which are defined by the intersections of the midway arcs along which the width 2B is measured ..." (See column 4, lines 16-18). It is contended by the examiner that the interface points 62 can be construed as a "center of growth". Therefore, Bennett implicitly discloses a "center of growth" even though it does not use the same terminology. By first determining the "center of growth" as disclosed in Bennett, the interface surface between components having different rates of thermal expansion can be determined with respect to the center of growth.

(Answer, p. 6).

First, the Answer provides no analysis or explanation as to why interface points 62 can be construed as the claimed center of growth. Appellant has previously noted that the Examiner confuses center of growth with a point at the interface. This is evident by the

Answer's continued position of equating "interface point '62' [with] (center of growth)." (Answer, p. 4).

Interface points 62, as taught by Bennett, are merely points on the interface. As clearly shown in the example of Fig. 2B from Appellant's specification, a center of growth (130) may *not* be a point at the interface between components. Consequently, the Answer's assertion that Bennett's interface points 62 are somehow a "center of growth" is an unsupported conclusion that cannot, by itself, sustain a rejection of Appellant's claims.

Moreover, even if Bennett's points 62 could be considered a "center of growth," which does not appear to be the case, Bennett still does not teach or suggest a method like that claimed in which the points 62 are determined as a center of growth for a proposed interface between components so that the subsequent method step of "forming an interface surface of said interface" can then be performed "with respect to [the] center of growth." (Claim 1). This subject matter is entirely outside the teachings of Bennett.

"A claim is anticipated [under 35 U.S.C. § 102] only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). See M.P.E.P. § 2131. Therefore, for at least the reasons explained here, Bennett does not and cannot anticipated claim 1. Therefore, the rejection based on Bennett of claim 1 and its dependent claims should not be sustained.

(3) Claims 1 and 9-11 are patentable over Piascik and Bennett:

As with all the other prior art references of record, Piascik and Bennett do not teach or suggest Appellant's concept of center of growth. Therefore, these reference cannot teach or suggest Appellant's method "comprising forming an interface surface of said interface with

respect to a center of growth such that slippage occurs at said interface between said components during volumetric expansion."

According to the Answer, "[a]s shown in the reasons stated above, the Bennett reference does teach the same method of forming an interface surface of the interface with respect to a center of growth such that slippage occurs at the interface between the components during volumetric expansion. Therefore, the Piascik and Bennett references do meet all of the limitations recited in claims 1 and 9-11." (Answer, pp. 7-8). Thus, this rejection relies entirely on the misapplication of Bennett addressed above.

As amply demonstrated above, Bennett does not, in fact, teach or suggest Appellant's claimed concept of center of growth or the claimed method "comprising forming an interface surface of said interface with respect to a center of growth such that slippage occurs at said interface between said components during volumetric expansion." Therefore, the rejection based on Piascik and Bennett should not be sustained.

In view of the foregoing, it is submitted that the final rejection of the pending claims is improper and should not be sustained. Therefore, a reversal of the Rejection of April 14, 2008 is respectfully requested.

Respectfully submitted,

DATE: November 19, 2008

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